



IFW 2833
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Myers's Docket No. B&H 011US/5487-127

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: David John Hollick

Serial No. 09/936,492

Filed: September 11, 2001

For: ELECTRICAL CONNECTOR WITH DEFORMABLE INSERT

Confirmation No. 7155

Group Art Unit: 2833

Examiner: Edwin A. Leon

Date: May 7, 2004

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**TRANSMITTAL OF APPEAL BRIEF
(PATENT APPLICATION--37 C.F.R. § 1.192)**

1. Transmitted herewith, in triplicate, is the APPEAL BRIEF for the above-identified application, pursuant to the Notice of Appeal filed on March 11, 2004.

2. This application is filed on behalf of
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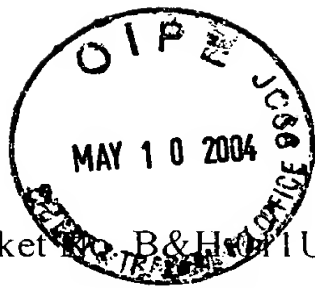
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Carey Gregory



Attorney's Docket No. B&H 01US/5487-127

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APPELLANT'S BRIEF ON APPEAL UNDER 37 C.F.R. §1.192

Sir:

This Appeal Brief is filed pursuant to the "Notice of Appeal to the Board of Patent Appeals and Interferences" filed March 11, 2004.

Real Party In Interest

The real party in interest is B & H (Nottingham) Ltd., the assignee of this application.

Related Appeals And Interferences

To Appellant's knowledge, there are no currently pending appeals or interferences related to the present appeal.

Status Of Claims

Appellant appeals the final rejection of Claims 1-6 and 8-29. These claims were rejected in the Final Official Action of December 17, 2003 ("Final Action") and in the Advisory Action of March 5, 2004. As of the filing date of this brief, Claims 1-6 and 8-29 remain under consideration. A copy of the claims as they stand on appeal is attached hereto as Appendix A.

Status of Amendments

The attached Appendix A presents the claims as amended by the Amendment of October 7, 2003. These Amendments were entered.

Summary of the Invention

The present invention provides electrical connectors including a socket insert that is deformable by a clamping member to retain an electrical conductor within a socket. *See* Specification, p. 1, line 21 to p. 2, line 1. The socket insert may advantageously reduce "the effective diameter of the socket" and may reduce "eccentricity of the positioning of a small diameter conductor within the socket." *See* Specification, p. 2, lines 2-4. As a result, "electrical field properties of the completed joint" may be improved and the completed joint may be "easier to insulate." *See* Specification, p. 2, lines 4-5. The socket insert may be used or removed, for example, depending on the diameter of a conductor being clamped in the electrical connector. *See* Specification, p. 4, lines 12-22.

In particular embodiments of the present invention, the socket insert has a castellated or corrugated profile. A "corrugated" profile is "a profile in which the material of the socket insert is of substantially uniform thickness but is formed into a succession of peaks and troughs." *See* Specification, p. 2, lines 19-20. A "castellated" profile is "an arrangement in which the thickness of the wall of the insert is non-uniform, the wall of the socket being formed with a series of longitudinal ridges spaced ... around the socket insert." *See* Specification, p. 2, lines 22-24. Examples of castellated and corrugated profiles are illustrated in Figures 2 and 5, respectively. *See* Specification, p. 5, lines 11-12.

Issues

1. Are Claims 1, 6, 13-14, 17, 20-22 and 24-29 properly rejected under 35 U.S.C. §102(e) as being unpatentable over United States Patent No. 6,109,984 to Tsou (hereinafter "Tsou")?
2. Are Claims 2 and 19 properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsou in view of United States Patent No. 5,630,737 to Dupont ("Dupont")?
3. Are Claims 3-4, 9-12, 15-16 and 23 properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsou in view of United States Patent No. 4,687,273 to Pranch ("Pranch")?

4. Are Claims 5 and 18 properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsou in view of United States Patent No. 5,422,438 to Lamome ("Lamome")?

5. Is Claim 8 properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsou in view of U.S. Patent No. 5,320,565 to Polidori ("Polidori")?

Grouping of Claims

For appeal, the claims may be grouped together as follows:

Group I: Claims 1-2, 6, 8, 13-14, 17, 19-22, and 24-29.

Group II: Claims 3-4, 9-11, 15-16 and 23.

Group III: Claims 5, 12 and 18.¹

Claims of Group I do not all stand or fall together, as Appellant submits that dependent Claims 28 and 29 are separately patentable and that that dependent Claims 21, 25 and 27 are separately patentable.

Argument

I. Introduction

The Group I, II, and III claims of the present application stand rejected as anticipated under 35 U.S.C. § 102(e) or obvious under 35 U.S.C. § 103.

A determination of anticipation under § 102 requires that each and every element of the claim is found in a single prior art reference. *W. L. Gore & Associates Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1554, 220 U.S.P.Q. 303, 313 (Fed. Cir. 1983). Stated another way, all material elements of a claim must be found in **one** prior art source. *See In re Marshall*, 198 U.S.P.Q. 344 (C.C.P.A. 1978). "Anticipation under 35 U.S.C. § 102 requires the disclosure in a single piece of prior art of each and every limitation of a claimed invention." *Apple Computer Inc. v. Articulate Sys. Inc.*, 57 U.S.P.Q.2d 1057, 1061 (Fed. Cir. 2000). A finding of anticipation further requires that there must be no difference between the claimed invention and the disclosure of the cited reference as viewed by one of ordinary skill in the

¹ Claim 12 has been grouped with Claims 5 and 8 as Appellant believes that the Examiner intended to reject Claim 12 based on the art cited against Claims 5 and 8, as Claim 12 contains essentially identical recitations.

art. *See Scripps Clinic & Research Foundation v. Genentech Inc.*, 927 F.2d 1565, 1576, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991). The Court of Appeals for the Federal Circuit has held that a finding of anticipation requires absolute identity for each and every element set forth in the claimed invention. *See Trintec Indus. Inc. v. Top-U.S.A. Corp.*, 63 U.S.P.Q.2d 1597 (Fed. Cir. 2002). Additionally, the cited prior art reference must be enabling, thereby placing the allegedly disclosed matter in the possession of the public. *In re Brown*, 329 F.2d 1006, 1011, 141 U.S.P.Q. 245, 249 (C.C.P.A. 1964). Thus, the prior art reference must adequately describe the claimed invention so that a person of ordinary skill in the art could make and use the invention.

A determination under § 103 that an invention would have been obvious to someone of ordinary skill in the art is a conclusion of law based on fact. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1593, 1 U.S.P.Q.2d 1593 (Fed. Cir. 1987), *cert. denied*, 107 S.Ct. 2187. After the involved facts are determined, the decision maker must then make the legal determination of whether the claimed invention as a whole would have been obvious to a person having ordinary skill in the art at the time the invention was made. *See Panduit*, 810 F.2d at 1596. The United States Patent and Trademark Office (USPTO) has the initial burden under § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988).

To establish a *prima facie* case of obviousness, the prior art reference or references when combined must teach or suggest *all* the recitations of the claims, and there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. *See* M.P.E.P. § 2143. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *See* M.P.E.P. § 2143.01(citing *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990)). As emphasized by the Court of Appeals for the Federal Circuit, to support combining references, evidence of a suggestion, teaching, or motivation to combine must be clear and particular, and this requirement for clear and particular evidence is not met by broad and conclusory statements about the teachings of references. *In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). In another

decision, the Court of Appeals for the Federal Circuit has stated that, to support combining or modifying references, there must be particular evidence from the prior art as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

Furthermore, as stated by the Federal Circuit with regard to the selection and combination of references:

This factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983). Thus the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion....

In re Sang Su Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002).

Appellant submits that the references cited in the Final Action fail to disclose or suggest every element of the rejected claims as required by the case law discussed above.

II. The Claims Are Patentable Over the Cited Reference

A. The Group I Claims are Patentable over Tsou

Claims 1, 6, 13-14, 17, 20-22 and 24-29 of Group I stand rejected under 35 U.S.C. §102(e) as anticipated by Tsou. Appellant submits that Tsou does not disclose or suggest many of the recitations of the Group I claims. Claim 1, for example, recites:

An electrical connector comprising a connector body including a tubular socket configured to receive an electrical conductor, clamping means arranged to secure the electrical conductor within the socket, and a socket insert fitting within the tubular socket so as to reduce the effective size of the socket, wherein the socket insert is tubular and is adapted to be deformed by the clamping means into retaining engagement with the electrical conductor and wherein the clamping means comprises at least one clamping bolt held in respective threaded bores in the connector body such that the at least one clamping bolt extends into the socket so as to clamp, via the socket insert, an electrical conductor inserted in the socket against an opposing surface of the socket.

Various of these recitations are also found in independent Claims 13, 21 and 22. Appellant submits that all of the Group I claims are allowable for at least the reasons discussed below regarding Claim 1. Accordingly, the rejections of the Group I claims under Sections 102 and 103 should be reversed for at least these reasons.

As an initial matter, Appellant notes that the Examiner's application of Tsou changed between the first and final Office Action in this matter. In particular, the Final Action rejections correspond to the previous rejections although the Examiner in the Final Action cites element 54 of the Tsou reference as corresponding to a "socket" rather than element 57 as was cited in the previous action. For purposes of this appeal, Appellant will only address the rejections as presented in the Final Action. Before responding to the particular points in the Final Action, Appellant provides the following general comments on the Tsou reference.

The Tsou Reference

In order for the Board to more fully comprehend the disclosure of Tsou at Col. 7, lines 1 - 25 relied on in the rejections, Appellant sets out below the content of Tsou at Col. 7, lines 1 - 25, in its entirety, accompanied by an explanation of what Appellant believes is clearly and unambiguously disclosed by each part of that passage.

Tsou discloses at Col. 7, lines 1 -15, a "first repair mode" of the described cable connector:

Alternatively, in case that the plug is damaged to such an extent that it is not possible to intactly withdraw the conductive pin 58, **one may simply cut off the wire 68 to separate the wire 68 from the plug and then expose and insert the conductive core 70 of the wire 68 into a new plug of the present invention.** A bolt (not shown) is then tightened in the inner threading 63 of the radial hole 62 to secure the conductive core 70 of the wire 68 to the conductive bar 54 and establish an electrical engagement between the conductive core 70 of the wire 68 and the conductive bar 54. It should be noted that in this case that the conductive core 70 of the wire 68 is fixed to the conductive bar 54 by means of a bolt, the conventional plug (renovation plug) that is shown in FIG. 2 may be adapted to replace the plug of the present invention.

See Tsou, Col. 7, lines 1-15 (emphasis added).

As shown by the highlighted portion, the first repair mode is clearly concerned with the case where it is not possible to intactly withdraw the conductive pin 58. These actions

necessarily leave the conductive pin 58 engaged with the damaged plug, so that the conductive core 70 of the separated wire 68 may be exposed and inserted into a new plug. There is no mention of the exposed conductive core 70 being engaged with a replacement conductive pin 58. Instead, Tsou is quite clear that the exposed conductive core 70 is engaged with a new plug, stating that a "bolt (not shown) is then tightened in the inner threading 63 of the radial hole 62 to secure the conductive core 70 of the wire 68 to the conductive bar 54 and establish an electrical engagement between the conductive core 70 of the wire 68 and the conductive bar 54." *See* Tsou, Col. 7, lines 6-10.

Clearly, in the first repair mode, it is only the exposed conductive core 70 of the wire 68 that is secured to the conductive bar 54 using a bolt. In particular, Tsou states it "should be noted that in this case that the conductive core 70 of the wire 68 is fixed to the conductive bar 54 by means of a bolt, the conventional plug (renovation plug) that is shown in FIG. 2 may be adapted to replace the plug of the present invention." *See* Tsou, Col. 7, lines 11-15.

The first repair mode, therefore, results in an arrangement that is essentially the same as the prior art arrangement illustrated in Figure 2. In other words, the first repair mode results in an arrangement that does not include a conductive pin 58, and so the new plug may be conventional in form.

Tsou discloses at Col. 7, lines 16-25, a "second repair mode" of the described cable connector:

On the other hand, if only the cable is damaged, but the plug is not, then a slender tool may be used to separate the conductive pin 58 from the plug and the plug may be re-used by for example inserting another conductive pin having a wire attached thereto into the plug or alternatively, by inserting the conductive core 70 of a wire 68 into the conductive bar 54 of the plug and securing the conductive core 70 to the conductive bar 54 by means of a bolt in which case the plug of the present invention serves as renovation plug.

See Tsou, Col. 7, lines 16-25.

In this case, the plug is not damaged, and the conductive pin 58 that is engaged with the damaged wire of the cable can be intactly withdrawn from the plug. The undamaged plug may then be re-used with an undamaged wire and its associated conductive pin 58. As stated in Tsou, such a replacement is "by for example inserting another conductive pin having a wire attached thereto into the plug." *See* Tsou, Col. 7, lines 19-20. This example of re-use

involves inserting another conductive pin 58, having an undamaged wire attached thereto, into the plug. There is no mention of a bolt being used, and indeed there is no need for a bolt to be used.

As an alternative, Tsou describes "inserting the conductive core 70 of a wire 68 into the conductive bar 54 of the plug and securing the conductive core 70 to the conductive bar 54 by means of a bolt in which case the plug of the present invention serves as renovation plug." *See* Tsou, Col. 7, lines 21-25. This example of re-use involves inserting the conductive core 70 of an undamaged wire into the plug, and securing the conductive core 70 to the plug using a bolt. There is no mention of the conductive core 70 being engaged with another conductive pin 58 before insertion. Indeed, in this case, the plug is said to serve as a renovation plug (*i.e.*, a plug of conventional form, as illustrated in Figure 2) because the conductive core 70 is inserted into the plug without a conductive pin 58.

Thus, Tsou discloses the use of a clamping bolt only where the exposed end of a conductive core is introduced directly into the plug, and not where the core is engaged with a conductive pin 58 that is inserted into the plug. In the latter case, a clamping bolt is not used. Instead, the pin 58 is retained in the plug by engagement of the barb 64 with the shoulder defined by the groove 60. *See* Tsou, col.5, lines 44-49. If the conductive pin 58 is used, then a clamping bolt is not used, and the teaching of Tsou never leads to an arrangement in which a clamping bolt acts upon a conductive pin 58.

The Rejections of the Group I Claims in the Final Action Should be Reversed

The Final Action asserts that Col. 7, lines 1-49 of Tsou "clearly discloses that the conductor (70) can be received in the cavity (57) and the bolt (Column 5, Lines 3-5) clamping the insert (58) and the conductor (70) against an opposing surface of the cavity (57)." The Final Action further states that the "fact that these features are met in a repair mode as mentioned in the Tsou reference does not preclude the claims from being anticipated." *See* Final Action, p. 6. Appellant agrees that, if Tsou actually disclosed all of the recitations of the claims, the fact that such a disclosure was in a repair mode would not preclude an anticipation rejection. However, the Examiner appears to have focused on the repair mode distinction rather than the fact that, in the repair mode, Tsou describes an

arrangement where the conductor 70 is clamped by the bolt **without** any insert 58 in the cavity 57.

The cited portion of Tsou, in its entirety, reads as follows:

Alternatively, in case that the plug is damaged to such an extent that it is not possible to intactly withdraw the conductive pin 58, **one may simply cut off the wire 68 to separate the wire 68 from the plug and then expose and insert the conductive core 70 of the wire 68 into a new plug of the present invention. A bolt (not shown) is then tightened in the inner threading 63 of the radial hole 62 to secure the conductive core 70 of the wire 68 to the conductive bar 54 and establish an electrical engagement between the conductive core 70 of the wire 68 and the conductive bar 54. It should be noted that in this case that the conductive core 70 of the wire 68 is fixed to the conductive bar 54 by means of a bolt, the conventional plug (renovation plug) that is shown in FIG. 2 may be adapted to replace the plug of the present invention.**

On the other hand, if only the cable is damaged, but the plug is not, then a slender tool may be used to separate the conductive pin 58 from the plug and the plug may be re-used by **for example inserting another conductive pin having a wire attached thereto into the plug or alternatively, by inserting the conductive core 70 of a wire 68 into the conductive bar 54 of the plug and securing the conductive core 70 to the conductive bar 54 by means of a bolt** in which case the plug of the present invention serves as renovation plug.

Thus, in view of the above description of the preferred embodiment of the present invention, the present invention provides a trailer connection cable plug structure which is capable to be used both in a cable manufacturing line and in a cable repairing workshop so that the trouble of the parts manufacturer in supplying different plugs to the cable manufacturer and the cable repair workshop is overcome. Furthermore, as discussed above, the cable plug structure of the present invention simplifies the manufacture of the trailer connection cable.

As mentioned previously, the present invention may be embodied in both a plug and a socket. The plug in accordance with the present invention has been discussed above. For a socket in accordance with the present invention, the first cavity of the conductive bar (reference numeral 54 above) of the plug may be simply eliminated and provided with a pin-like projection for insertion into the first cavity of the conductive bar of the plug. Or alternatively, a pin may be inserted into the first cavity of the conductive bar to serve as the pin-like projection. This is only a matter of design and manufacture so that there is no need to recite the structure discussed above for a socket in accordance with the present invention.

See Tsou, Col. 7, lines 1-49 (emphasis added). Thus, the first repair mode, where the plug is damaged, is described as not using the pin 58 when inserting the core 70 and securing the core 70 with a bolt. In the second repair mode, where the plug is not damaged, two

alternative approaches are provided. Either an undamaged pin can be used, in which case no suggestion is made to use a securing bolt, or the core 70 can simply be secured by a bolt as described for the first repair mode. Thus, none of the cited portion of Tsou describes securing the core 70 and the pin 58 in the cavity 70 with a bolt. Appellant submits that the rejections should be reversed as the Examiner's description of Tsou is contrary to the actual text of Tsou.

Appellant notes that the Advisory Action again asserts that Column 7, lines 1-49 of Tsou "clearly discloses that the conductor (70) can be received in the cavity (5) and the bolt ... clamping the insert (58) and the conductor (70) against an opposing surface of the cavity (57). The fact that these are made in the repair mode ... does not preclude the claims from being anticipated by Tsou." *See* Advisory Action, Continuation Sheet. Appellant respectfully submits that the cited portion of Tsou, as discussed in detail above, simply fails to disclose or even suggest the present invention as claimed in the Group I claims as there is no condition under which Tsou suggests use of a clamping bolt to retain the conductor (70) when item 58 is in use.

Furthermore, various of the Group I claims are separately patentable. In particular, Claims 28 and 29 each include recitations that the Final Action never addresses. For example, Claims 28 and 29 specifically recite that the insert "has a diameter less than a diameter of the socket to allow the socket insert to be movably positioned in the socket." In contrast, the pin 58 of Tsou appears to be a press fit into the cavity 57. Accordingly, the rejections of Claims 28 and 29 should also be reversed for at least these additional reasons.

Claims 21, 25 and 27 each include recitations related to the relationship between the socket insert and the socket. For example, Claim 25 recites that "the socket insert has a diameter selected to reduce an effective diameter of the socket to reduce eccentricity of positioning of the electrical conductor within the socket." With respect to these recitations, the Final Action asserts that Figure 4 of Tsou discloses "the socket insert (58) having a diameter selected to reduce an effective diameter of the socket (54) to reduce eccentricity of positioning of the electrical conductor (70)." *See* Final Action, p. 7. As to the assertion that the pin 58 is "selected to reduce an effective diameter," Appellant submits that the pin is simply a press fit into the cavity 57, and that the conductor 70, when used with the pin 58,

merely clamps to a back end of the pin 58 as shown in Figure 4 of Tsou. Furthermore, with reference to reducing "eccentricity of positioning of the electrical conductor," again, as the conductor 70 is merely clamped at a back end of the pin 58, the pin clearly is not reducing a diameter of the cavity 57 to reduce eccentricity. In fact, at the clamped portion shown in Figure 4 of Tsou, the pin 58 is retaining the conductor 70 without reference to or use of the cavity 57. In other words, the pin 58 maintains the same relation to the conductor 70 before and after insertion of the pin 58 in the cavity 57 and the angle relationship of the clamping section 55 to the portion of the pin 58 inserted in the cavity 57 determines the positioning of the conductor 70 relative to the cavity 57. Accordingly, the rejections of Claims 21, 25 and 27 should also be reversed for at least these additional reasons.

B. The Group II Claims are Patentable over the Cited References

Group II Claims 3-4, 9-11, 15-16 and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsou in view of Pranch. As an initial matter, Appellant notes that each of the Group II claims is patentable at least for the reasons discussed above with reference to the Group I claims from which they depend. Furthermore, Appellant submits that there is nothing in Tsou that would motivate one of skill in the art to combine Tsou with Pranch's rod 2 having threaded surfaces 4. As the Final Action asserts that the conductive pin 58 of Tsou is a "socket insert," it is unclear why one of skill in the art would so modify Tsou with Pranch. *See*, Final Action, p. 3. In particular, with reference to conductive pin 58, Tsou states:

The conductive pin 58 is a tubular member in the embodiment illustrated which is preferably made of a metal sheet by means of **mechanical stamping** so as to form a tubular structure **having at least slightly elastic deformability**. The conductive pin 58 **has a cross-sectional size and shape that correspond to the second cavity 57 of the conductive bar 54** so as to be receivable therein. Preferably, **the cross-sectional size of the conductive pin 58 is slightly greater than that of the second cavity 57 so that when the conductive pin 58 is forcibly fit into the second cavity 57, it is squeezed and compressed inward which causes an elastic deformation, resulting in a tight engagement with the inside surface of the second cavity 57 which in turn forms a surface contact between the conductive pin 58 and the second cavity 57. This provides a good electrical engagement between the conductive pin 58 and the conductive bar 54 or 54'.**

See, Tsou, Col. 5, lines 17-32 (emphasis added). In light of this description, one of skill in the art would clearly not be motivated to make the combination relied on in the rejections of the Group II claims. Furthermore, the Final Action provides no basis in the cited references for the alleged motivation being "to improve the mechanical strength of the retaining engagement." *See* Final Action, p. 4. Thus, the rejections of Claims 3-4, 9-11, 15-16 and 23 should also be reversed for at least these additional reasons.

C. The Group III Claims are Patentable over the Cited References

As an initial matter, Appellant notes that Claim 12 is grouped with and rejected based on Tsou and Pranch in the Final Action, not with the Group III claims. However, as Appellant believes that the Examiner intended to reject Claim 12 based on the art cited against Claims 5 and 18, as Claim 12 contains essentially identical recitations, Claim 12 is grouped for appeal with Group III and treated as rejected for the same reasons as the other Group III claims. If the Board disagrees, Appellant submits that Claim 12 should be treated as part of Group II.

Group III Claims 5, 12 (see above) and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsou in view of Lamome. As an initial matter, Appellant notes that each of the Group III claims is patentable at least for the reasons discussed above with reference to the Group I claims from which they depend. Furthermore, Appellant submits that there is nothing in Tsou that would motivate one of skill in the art to combine Tsou with Lamome. As with the Group II claims, given the description of the conductive pin 58 in

Tsou, there is simply no support for the alleged motivation to combine Tsou and Lamome, which is identical to the motivation alleged for combining Tsou with Pranch. Accordingly, the rejection of the Group III claims should also be reversed for at least these additional reasons.

D. The Original Rejections Based on Tsou

As noted above, the rejections based on Tsou were modified during prosecution. Accordingly, should those rejections still be considered at issue in this case, Appellant presents below a summary of the arguments presented responsive to the original rejections (*i.e.*, viewing the conductive bar 54 of Tsou as the claimed connector body and the second cavity 57 of Tsou as the claimed socket):

1) The conductor 70 of Tsou is not received within the cavity 57 ("the rear end of the conductive pin 58 is left outside the conductive bar 54", Tsou, Col. 6, lines 1-12). The conductor 70 of Tsou is only described as received in the cavity 57 in a repair mode where the conductive pin 58 is not used. *See* Tsou, Col. 7, lines 1-10.

2) The pin 58 of Tsou is configured to snugly fit in the cavity 57 and does not "reduce eccentricity." *See* Tsou, Col. 5, lines 17-37.

3) The bore 62 of Tsou as described as being used to allow removal of, not to retain, the pin 58. *See* Tsou, Col. 6, lines 53-59.

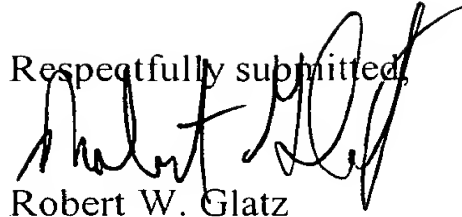
4) The pin 58 is not deformed by the bolt (not shown) in the opening 62 to engage the conductor 70 of Tsou against an opposing surface of the cavity 57 as the conductor 70 is attached to the rear end of the pin 58 outside of the cavity 57. *See* Tsou, 6, lines 1-12.

III. Conclusion

In light of the above discussion, Appellant submits that each of the pending claims is patentable over the cited references and, therefore, request reversal of the rejections of Claims 1-6 and 8-29.

In re: David John Hollick
Serial No. 09/936,492
Filed: September 11, 2001
Page 14 of 19

Respectfully submitted,

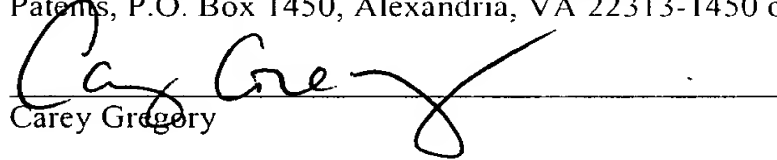


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APPENDIX A
Pending Claims USSN 09/936,492
Filed September 11, 2001

1. An electrical connector comprising a connector body including a tubular socket configured to receive an electrical conductor, clamping means arranged to secure the electrical conductor within the socket, and a socket insert fitting within the tubular socket so as to reduce the effective size of the socket, wherein the socket insert is tubular and is adapted to be deformed by the clamping means into retaining engagement with the electrical conductor and wherein the clamping means comprises at least one clamping bolt held in respective threaded bores in the connector body such that the at least one clamping bolt extends into the socket so as to clamp, via the socket insert, an electrical conductor inserted in the socket against an opposing surface of the socket.

2. A connector as claimed in Claim 1, wherein the socket insert is aluminum.

3. A connector as claimed in Claim 1, wherein the socket insert has at least one of a castellated or corrugated profile on an outside surface thereof.

4. A connector as claimed in Claim 3, wherein the socket has a castellated profile.

5. A connector as claimed in Claim 1, wherein an internal surface of the tubular socket insert has at least one of serrations or tooth-like formations.

6. A connector as claimed in Claim 1, wherein the socket is a bore of substantially circular cross-section.

7. (Canceled).

8. A connector as claimed in Claim 1, wherein the at least one clamping bolt includes a shearable head that shears off when a torque applied to the at shearable head exceeds a predetermined value.

9. A socket insert for an electrical connector having a socket in which, in use, an electrical conductor is received, the socket insert comprising a tubular and deformable member having a at least one of a castellated or corrugated profile on an outside surface thereof.

10. A socket insert as claimed in Claim 9 wherein the socket insert comprises aluminum.

11. A socket insert as claimed in Claim 9 wherein the socket insert has a castellated profile on an outside surface thereof.

12. A socket insert as claimed in Claim 9, wherein an internal surface of the tubular socket insert includes at least one of serrations or tooth-like formations.

13. An electrical connector comprising:
a connector body defining a socket therein;
a clamping member coupled to the connector body adapted to secure an electrical conductor within the socket; and
a socket insert positioned within the socket adjacent the clamping member, the socket insert being configured to be deformed by the clamping member into retaining engagement with the electrical conductor within the socket.

14. The electrical connector of Claim 13 wherein the socket insert is substantially tubular.

15. The electrical connector of Claim 14 wherein the socket insert has a castellated profile on an outside surface thereof.

16. The electrical connector of Claim 14 wherein the socket insert has a corrugated profile on an outside surface thereof.

17. The electrical connector of Claim 14 wherein the electrical conductor is received within the tubular socket insert to position the socket insert between the clamping member and the electrical connector and between an opposing surface of the socket relative to the clamping member and the electrical conductor.

18. The electrical connector of Claim 17 wherein an internal surface of the socket insert includes at least one of serrations or tooth-like formations.

19. The electrical connector of Claim 13 wherein the socket insert comprises aluminum.

20. The electrical connector of Claim 13 wherein the clamping member comprises at least one bolt, the at least one bolt being positioned in a threaded bore in the connector body.

21. A socket insert for an electrical connector, the socket insert comprising a tubular member configured to be movably positioned within an internal socket of the electrical connector and to be deformed by a clamping member of the electrical connector into retaining engagement with an electrical conductor within the socket insert, the socket insert having a diameter selected to reduce an effective diameter of the socket to reduce eccentricity of positioning of the electrical conductor within the electrical connector.

22. An electrical connector comprising:
a connector body defining a socket therein;

a clamping member coupled to the connector body adapted to secure an electrical conductor within the socket;

a substantially tubular socket insert positioned within the socket adjacent the clamping member, the socket insert being configured to be deformed by the clamping member into retaining engagement with the electrical conductor within the socket; and

wherein the electrical conductor is received within the tubular socket insert to position the socket insert between the clamping member and the electrical connector and between an opposing surface of the socket relative to the clamping member and the electrical conductor.

23. The electrical connector of Claim 22 wherein the socket insert has at least one of a castellated or corrugated profile on an outer surface thereof.

24. The electrical connector of Claim 13 wherein the socket insert is movably positioned in the socket when not contacted by the clamping member.

25. The electrical connector of Claim 24 wherein the socket insert has a diameter selected to reduce an effective diameter of the socket to reduce eccentricity of positioning of the electrical conductor within the socket.

26. The electrical connector of Claim 22 wherein the socket insert is movably positioned in the socket when not contacted by the clamping member.

27. The electrical connector of Claim 26 wherein the socket insert has a diameter selected to reduce an effective diameter of the socket to reduce eccentricity of positioning of the electrical conductor within the socket.

28. The electrical connector of Claim 26 wherein the socket insert has a diameter less than a diameter of the socket to allow the socket insert to be movably positioned in the socket when not contacted by the clamping member.

In re: David John Hollick
Serial No. 09/936,492
Filed: September 11, 2001
Page 19 of 19

29. The socket insert of Claim 21 wherein the socket insert has a diameter selected to be less than a diameter of the internal socket of the electrical connector to allow the socket insert to be movably positioned in the socket when not contacted by the clamping member.